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10/553,671	10/17/2005	Valerie Bicard-Benhamou	MERCK-2686-2	1527

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EXAMINER

RAO, SAVITHA M

ART UNIT	PAPER NUMBER
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1614

NOTIFICATION DATE	DELIVERY MODE
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04/15/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/553,671	Applicant(s) BICARD-BENHAMOU ET AL.	
	Examiner SAVITHA RAO	Art Unit 1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17, 19-37, 42, 43 and 45 is/are pending in the application.
- 4a) Of the above claim(s) 29-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-28, 33-37, 42, 43 and 45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/18/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-17, 19-37, 42, 43 and 45 of the instant application are pending.

Receipt and consideration of Applicants' amended claim set and remarks/arguments filed on 10/07/2009 is acknowledged. Claim 1 is amended and new claim 45 is added. Claims under consideration in the instant office action are claims 1-17, 19-28, 33-37, 42-43 and 45.

Applicants' arguments, filed 10/07/2009 have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

During the search for the elected specie (b) proteins, other compounds which are suitable substrates for microorganisms was found such as water, sugar, fatty acid were found , therefore the examination was expanded to include these species.

During the search for the elected specie (f) Spherical particles, platelet shaped particles was found and the examination was expanded to include these specie.

During the search for the elected specie (d) synthetic mica, other species such as metal oxides which includes titanium oxide and aluminum oxide were found and the examination was expanded to include these species.

During the search for the elected specie (e) TiO₂, other species such as silica (SiO₂), Zinc oxide, magnesium oxide, calcium oxide, aluminum oxide, ferric oxide,

Art Unit: 1614

sodium oxide and potassium oxide were found and the examination was expanded to include these species.

During the search for the elected specie (i) vancomycin other antibiotics such as tetracycline, macrolides, fluoroquinolones and quinolone was found and the examination has been expanded to include these species

Claims 1-17, 19-28, 33-37, 42-43 and 45 have been examined to the extent to which they are readable on the elected embodiment and the above identified nonelected species. Since art was found on a nonelected species, subject matter not embraced by the elected embodiment or the above identified nonelected species is therefore withdrawn from further consideration. It has been determined that the entire scope claimed is not patentable.

Terminal Disclaimer

The terminal disclaimer filed on 05/13/2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 10553668 has been reviewed and is NOT accepted.

The terminal disclaimer does not comply with 37 CFR 1.321 (c) because: more than 10 practitioners are listed on the patent application (see 37.CFR 1.32 (c) (3).

Claim Rejections - 35 USC § 103

New grounds of Rejection (all references already of record)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 6-17, 19, 33-37, 42 , 43 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo et al. (US 6030627) in view of Bagala, Sr. (U.S. Patent No. 7,045,007B2; Cited in a previous Action),

It is respectfully pointed out that the limitations with respect to the antimicrobial pigment recited in claim 1 and claims 10-13, 14-17 and 35-37 are product-by-process claims. As per MPEP section 2113 (R-1) product by process claims. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed Cir. 1985). See MPEP 2113. Thus, because the combination of the following references discloses a product that is similar to what is instantly claimed, then the process limitations, while considered, are not patentably *limiting* to the claims because the prior art discloses an identical product and, therefore, the manner in which it was made fails to apparently result in a product different from that which is already known in the prior art.

Seo *et al.* teaches, an antimicrobial cosmetic pigment comprising inorganic cosmetic pigment, amorphous glassy coating layer of metal oxide having a lattice structure formed over the surface of said inorganic cosmetic pigment and antimicrobial metals or antimicrobial metal ions intercalated inside the lattice structure of said coating layer of metal oxides and teaches wherein the inorganic cosmetic pigment may be

Art Unit: 1614

mica, zinc oxide, and titanium dioxide, for example, and wherein the coating layer of metal oxide comprises silica alone, or as the main ingredient and one or more of zinc oxide and ferric oxide, for example (reference claims 1, 3, 4, 7 and 8). Furthermore, in the instant excerpt, Seo *et al.* teaches wherein the antimicrobial metal is one or more of silver and zinc, for example, and comprises 0.00001 to 5.0 parts by weight to 100 parts of the coating layer of metal oxide. With reference to the cosmetically or dermatologically suitable vehicles Seo *et al.* teaches examples 10, (table 8, column 15) and example 11 (Table 9, column 15) teaches formulation comprising his inventive antimicrobial pigment with cosmetically and dermatologically suitable vehicles such as purified water, propylene glycol, cetosteryl alcohol (example 10) and purified water, glycerin, polyvinyl alcohol and ethanol (example 11).

With respect to instant claims 2 and 19, Seo *et al.* teaches that adding preservatives to cosmetics prevents deterioration, change of smells, i.e., malodor, and change of fragrance by microbes, or microorganisms, and germination of fungi by sterilizing or restraining the breeding of the microbes (column 1, lines 17-23, and column 2, lines 9-18 In column 5, lines 33-45). Seo *et al.* further teaches that his inventive antimicrobial pigment shows excellent effects when combined with other preservatives (col.1, lines 57-60).

With reference to instant claim 3, Seo *et al.* teaches, that the cosmetic of the reference invention may be in the form of a creams used as skin care products such as sunscreen cream, cream, lotion, skin conditioner etc., wherein the antimicrobial cosmetic pigments, which encompass inorganic cosmetic pigments, amorphous glassy

Art Unit: 1614

coating layer of metal oxide, and antimicrobial metals, for example, may be in a quantity for use in cosmetics, preferably at 0.01-30 weight percent (column 8, lines 34-58).

With reference to instant claims 4-5, Seo et al. teaches that microbes including bacteria need water and nutrients to reproduce and cosmetics contains may kinds of raw materials, the carbon source of which can be used by the microorganisms to reproduce (column 1, line 66 to col.2,line 4). Seo et al. also teaches a liquid foundation of his invention, which comprises Xanthum gum (sugar), sorbitane sesquioleate and stearic acid (fatty acids) and water (Table 8, Example 10).

With respect to instant claims 6, 14 and 15, Seo et al. teaches his antimicrobial cosmetic pigment comprising inorganic pigment of either metal oxides such as aluminum oxide, zinc oxide, titanium oxide, mica, barium sulphate etc. to have an average granular diameter within the range of 0.1-50 μm which suggests that the particles disclosed by Seo et al. was spherical in nature (reference claim 2, and column 4, lines 54-56).

With respect to instant claims 10 and 12-13, Seo et al. teaches an amorphous glassy coating layer of metal oxides over the surface of inorganic cosmetic pigments made of silica (SiO_2), zinc oxide, magnesium oxide, calcium oxide, etc (column 4., line 63 to column , line 3).

With respect to instant claim 15-17, Seo et al. teaches in the method of preparation of his antimicrobial pigment particles, to have a first coating of silica over the surface or the inorganic pigment and than applying a second coating with metal

Art Unit: 1614

oxides (col.6, line 12, lines 26-33) which suggests multiple layers and also suggests the use of silica as a protective layer on the pigment.

With respect to instant claim 33, Seo et al. teaches his inventive antimicrobial pigment in formulation which comprises customary excipient such as propylene glycol, lecithin (wax) and purified hohoba oil (vegetable fat) (example 11, column 15, items 3, 6 and 9))

Finally Seo et al. teaches his inventive antimicrobial cosmetic pigment to have excellent antimicrobial activity, and not only does the cosmetics containing them possess outstanding preservative activity compared with those containing conventional preservatives, but they demonstrate consistent preservative effects and as such can be used advantageously as inorganic preservative agents of excellent preservative activity and good security for skin for all sorts of cosmetics (column. 16, lines 48-56). Seo et al. also teaches his inventive pigment to be free of the restraint of pH ranges in cosmetic compositions, excellent in the effects from a combined use with other preservatives and does not lower the concentrations or decrease the activity through entering into the micelle of the used nonionic surfactants and or forming complexes and in addition it exercises excellent antimicrobial activity making it possible to produce cosmetic compositions of excellent dermal safety and protection against secondary contamination with microbes while the product is in transit (column 1, line 57 to column 2, line 9).

With respect to the limitations recited in instant claim 45, wherein the color of the inorganic pigment before being combined with silver and the color of the resultant antimicrobial pigment are the same, Seo et al. teaches that the composition of the

Art Unit: 1614

coating layer with metal oxide is similar to glass which means the final color of the pigment will be the same as the initial color. Seo et al. in addition teaches that ferric oxide which imparts further stability to the coating but also provides color can be included in his preparation. It is noted that the amount of ferric oxide taught by Seo et al ranges from 0-3% by weight which suggests composition comprising 0% or no ferric oxide in which case the color of the inorganic pigment after combining with silver would be the same as the color before combining with silver.

Seo *et al.* fail to disclose specifically wherein one or more layers of transparent, semitransparent or opaque, selectively absorbing, nonselectively absorbing or nonabsorbing metal oxides, i.e., titanium dioxide, are arranged as alternating layers wherein the refractive index $n > 1.8$ and $n < 1.8$ and also fails to teach wherein the Hunter model I, a and b values of said pigment particles with silver oxide as recited in instant claim 1 and 42.

However, Bagala, Sr. *et al.* teaches an effect pigment comprising metal oxide-coated laminar platelets in which the platelets are a mixture of about 5 to 90% platy glass and 90 to 5% platy mica, i.e., synthetic mica (reference claims 1-8, columns 11 and 12, column 1, line 50), wherein the metal oxide comprises iron oxide (inorganic colorant or dopant; instant claim 13) and titanium dioxide. In the instant excerpt, Bagala, Sr. *et al.* further teaches wherein the metal oxide coating comprises a plurality of layers, each of which comprises a metal oxide. Bagala, Sr. *et al.* teaches the effect pigments constructed with a reflecting layer, i.e., silver, which is overcoated with a low index of refraction material typically having a refractive index from 1.3 to 2.5, which, in

Art Unit: 1614

turn, may be overcoated with a layer comprising iron and titanium dioxides (column 4, lines 38-52). Bagala, Sr. *et al.*, further teach applications in which the referenced pigments may be used, such as mascara cake/cream, shaving cream and eye shadow cream (instant claim 3 and column 6, lines 52-63). , Bagala, Sr. *et al.* disclose effect pigments constructed with a reflecting layer, i.e., silver, which is overcoated with a low index of refraction material typically having a refractive index from 1.3 to 2.5, which, in turn, may be overcoated with a layer comprising iron and titanium dioxides (column 4, lines 38-52).

With respect to the limitations wherein the materials of the layers have a refractive index $n > 1.8$ and $n < 1.8$ as recited in instant claim 11 and wherein the Hunter model I, a and b values of said pigment particles with silver oxide as recited in instant claim 1 and 42, The antimicrobial pigment taught by Seo et al. has the same make up of metal oxides and pigments as instantly claimed. As such the refractive index and the Hunter model values are functional limitations of the antimicrobial pigments. . Since the reference teaches using the instantly claimed antimicrobial pigment comprising the instantly claimed mica with layers of metal oxide and silica it necessarily follows that the antimicrobial pigment particle of Seo et al. will possess these values as alleged by the Applicant, absent factual evidence to the contrary. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.

Art Unit: 1614

1990). Office lacks laboratory facilities to test the prior art compounds and compositions. It is incumbent upon applicants to provide data demonstrating that the properties of the disclosed prior art compounds/compositions are different from the claimed compositions.

In view of the foregoing references, the instantly formulation for topical application comprising antimicrobial pigment would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made. Seo et al. teaches antimicrobial particles comprising silver as the antimicrobial agent incorporated on to inorganic pigment coated with metal oxides. Seo et al. further teaches the advantages of the antimicrobial pigment of his invention to have excellent preservative properties and is amenable for topical application as detailed above. Accordingly, an ordinarily skilled artisan would be motivated by the teachings of Seo et al. to develop a formulation comprising an antibacterial pigment made up of inorganic pigment coated with metal oxides since it not only would perform as a better preservative than conventional preservative but also possess consistent preservative effects, thereby increasing the shelf life of the product and is also highly amenable to topical dermal use. An ordinarily skilled artisan will be imbued with at least a reasonable expectation of success that such a formulation would provide lasting stability to the product and also prevent with least side effects and increased patient compliance.

Accordingly, the instant invention, as claimed in claims 1-3, 6-17, 19, 33-37, 42, 43 and 45 is *prima facie* obvious over the combination of the aforementioned teachings.

Claims 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo et al. and Bagala et al. , as applied to claims 1-3, 6-17, 19, 33-37, 42, 43 and 45 above, and further in view of Vollhardt (U.S. Patent No. 6,274,124B1; Cited in a previous Action) , Scott *et al.* (U.S. Patent No. 6,482,397B1; Cited in a previous Action), and Eini et al. (US 2003/0157138).

The teachings of Seo et al. and Bagala et al. are as recited *supra*.

Seo et al and Bagala *et al.* fail to disclose specifically the inclusion of ingredients, such as one or more UV filters, skin-protecting or skin-care active ingredients, or at least one photostabilizer (instant claims 22, 27 and 28, respectively), at least one antibiotic (instant claims 20 and 21), at least one self-tanning agent (instant claim 23) and vitamins (instant claim 26);

However, Vollhardt discloses, in the Abstract, a conventional cosmetic or dermatological active agent in a cosmetically and/or pharmaceutically acceptable carrier for topical application to the skin of humans. Vollhardt discloses, in column 4, line 36 through column 5, line 54, wherein the formulation is suitable for the addition of 1,2-pentanediol, an emulsifier, which in addition to UV filter substances, may comprise antioxidants and inorganic pigments. Furthermore, in the instant excerpt, Vollhardt discloses wherein the formulation may further comprise at least one antiperspirant and/or at least one skin whitening compound, which would have been reasonably construed by a skilled artisan, at the time of the invention, to be skin-protecting or skin-care active ingredients. In column 1, lines 42-49, Vollhardt discloses the UV filter

Art Unit: 1614

substance 2-phenylbenzimidazol, a known photostabilizer. Additionally, in column 2, lines 12-20, Vollhardt discloses wherein the aforementioned inorganic pigments, coated or uncoated, are known to be used in sunscreen products to help protect the skin from UV rays. In the instant excerpt, Vollhardt further discloses wherein the inorganic pigments, such as oxides of titanium, zinc and iron, are typically used in addition to organic UV filter substances. Therefore, a skilled artisan would have envisaged the cosmetic formulation comprising the modified antimicrobial cosmetic pigment of the combined teachings, as disclosed by Seo et al. and Bagala, Sr., further comprising conventional active ingredients, such as UV filter substances, skin-protecting or skin-care active ingredients, and at least one photostabilizer, as disclosed by Vollhardt. One of ordinary skill in the art would have been motivated to combine the teachings of the aforementioned references when seeking a novel cosmetic or dermatological composition with increased water resistance and light (sun) protection. It would have been obvious to one of ordinary skill in the art, at the time of the invention, because the combined teachings of the prior art are fairly suggestive of the claimed invention.

Scott *et al.* disclose, in reference claims 1-3, a composition comprising an artificial tanning effective amount of a self-tanning agent, i.e. dihydroxyacetone (DHA), a coloring agent, and a cosmetically acceptable carrier adapted for topical application to human skin. Additionally, Scott *et al.* disclose, in column 1, lines 52-65, that though DHA is used as a widely accepted self-tanning agent, coloring agents are included in sunless tanning compositions to provide the applier the ability to more accurately assess where they have applied the compositions to their skin. In column 4, line 49,

Art Unit: 1614

through column 5, line 42, Scott *et al.* disclose wherein the composition further comprises antimicrobial agents, preservatives, antioxidants, vitamins and waxes, for example. In the instant excerpt, Scott *et al.* further disclose wherein antimicrobial agents and preservatives inhibit microbial growth in the compositions, and can be used to treat infected, or potentially infected, areas of skin.

Eini *et al.* discloses a pharmaceutical or cosmetic compositions for topical application comprising an antibiotic agent such as tetracycline, fluoroquinolones, quinolone and macrolides (reference claims 49-50, paragraphs [0075]). As such use of antibiotics in cosmetic compositions is known in the art.

Therefore, a skilled artisan would have envisaged the composition comprising the modified antimicrobial cosmetic pigment of the combined teachings Seo *et al.* and Bagala *et al.*, further comprising one or more of the conventional active ingredients, such as at least one antibiotic, at least one self-tanning agent, i.e., dihydroxyacetone, and vitamins as taught by Vollhardt, Scott *et al.*, and Eini *et al.* An ordinarily skilled artisan would be motivated to utilize the appropriate active ingredient based on the ultimate utility of the formulation being prepared for e.g. an U.V protecting agent in the formulation of a sunscreen lotion. One of ordinary skill in the art would have been motivated to combine the teachings of the aforementioned references when preparing a composition comprising a light, water and heat resistant antimicrobial inorganic pigment to be applied topically. It would have been obvious to one of ordinary skill in the art, at the time of the invention, because the combined teachings of the prior art are fairly suggestive of the claimed invention.

Response to applicant's arguments filed on 03/18/2010:

in light of the new grounds of rejection above, the arguments submitted on 03/18/2010 which was for the previously submitted rejection is moot.

Double Patenting (Maintained and Amended)

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3, 6-13, 18, 34 and 38-42 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 6, 7 and 14-16 of copending application no. 10/553,668 (Serial No. '668), in view of Seo et al. (US 6030627, already of record)

Although the conflicting claims are not identical, they are not patentably distinct from each other because U.S. application no. '668 claims an antimicrobial pigment, obtainable by agitating at 20-45 °C, a suspension comprising one or more inorganic

Art Unit: 1614

pigments, i.e., synthetic mica, and silver oxide, and/or glass substrates with an outer layer of TiO_2 , for example, wherein the one or more inorganic pigments are in each case, platelet-shaped, spherical or needle-shaped. Furthermore, U.S. application no. '668 claims wherein the substrates are coated with one or more layers of transparent, semitransparent or opaque, selectively absorbing, nonselectively absorbing or nonabsorbing metal oxides, such as TiO_2 , arranged as alternating layers with a refractive index $n > 1.8$ and $n \leq 1.8$, which may additionally contain organic and/or inorganic colorants or elements as dopant. U.S. application no. '668 additionally claims wherein the values for L, a, and b for the inorganic pigments and antimicrobial pigments are $-6 \leq \Delta L \leq 6$, $-5 \leq \Delta a \leq 5$, and $-5 \leq \Delta b \leq 5$, respectively. U.S. application no. '668 claims wherein the silver oxide is substituted by zinc oxide, and wherein the antimicrobial compound is in the range of 0.001 to 10% by weight, based on the inorganic pigment.

U.S. application no. '668 does not claim specifically wherein the antimicrobial pigment is formulated into a cream; however Seo et al. teaches cosmetics such as lotions, creams, powder foundations, etc comprising an antimicrobial pigment comprising silver embedded on inorganic pigment coated with metal oxide (col.8, lines 30-64).

Therefore, a skilled artisan would have envisaged the antimicrobial pigment, comprising one or more inorganic pigments, i.e., synthetic mica, and silver oxide, as disclosed by application no. '668, formulated into an emulsion, i.e., cream, as disclosed by Seo et al. One of ordinary skill in the art would have been motivated to combine the teachings of the aforementioned references when seeking to elicit the antimicrobial

Art Unit: 1614

effects of the antimicrobial pigment through conventional applications, such as topical administration via a cream. It would have been obvious to one of ordinary skill in the art, at the time of the invention, because the combined teachings of the prior art are fairly suggestive of the claimed invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

1-17, 19-28, 33-37, 42-43 and 45 are rejected, no claims are allowed

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAVITHA RAO whose telephone number is (571)270-5315. The examiner can normally be reached on Mon-Fri 7 am to 4 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached at 571-272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SAVITHA RAO/
Examiner, Art Unit 1614

/Ardin Marschel/
Supervisory Patent Examiner, Art Unit 1614